

SYSTEM AND METHOD FOR
CONVERTING A PLURALITY OF WAVELENGTHS

5 ABSTRACT

10 In one aspect of the invention, an apparatus operable to convert wavelengths of a plurality of optical signals includes a coupler operable to receive a pump signal and a plurality of input signals each input signal comprising at least one wavelength different than the wavelengths of others of the plurality of input optical signals. The apparatus further includes an optical medium operable to receive the pump signal and the plurality of input signals from the coupler, wherein the pump signal and each of the plurality of input signals are synchronized to overlap at least partially during at least a part of the time spent traversing the optical medium to facilitate generation of a plurality of converted wavelength signals each comprising a wavelength that is different than the wavelengths of at least some of the plurality of input signals. Various embodiments can result in low cross-talk and/or low polarization sensitivity.

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